

# Update on asthma prevalence in severe COVID-19 patients

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June 11, 2020

*To the Editor,*

We read carefully the research letter “Is asthma protective of COVID-19?” by Carli et al recently published.<sup>1</sup> Important topic for asthma patients in the coronavirus disease 2019 (COVID-19) pandemic were considered, including that until recently weak evidence that patients with chronic respiratory disorders are at a lower risk of being infected or becoming severely ill with Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2).

Reflecting only about previous reports from China and Italy where asthma was underrepresented in COVID-19 patients, the authors accept the heterogeneous condition that it is asthma, speculating that T2-immunity, interferon-mediated immune responses and increased number of eosinophils in the airways could have a protective effect against COVID-19 severity.<sup>1</sup>

The epidemiology of COVID-19 is changing rapidly with new data. More recent reports from the United States of America and from several European countries, in particular the United Kingdom (UK), states a higher asthma prevalence in patients with COVID-19, suggesting that asthma is more common in COVID-19 patients than it was previously reported in Asia and in the first European surveys.<sup>2</sup> Data from the UK Biobank, a large prospective case-control study, found an asthma prevalence of 17,9% in 605 COVID-19 hospitalized patients, mostly of them adults, surpassing the prevalence of asthma in the general population.<sup>3</sup>

Besides that, in the OpenSAFELY Collaborative Study (UK), it was found a significant increased risk of severe CoViD-19 in patients with asthma, including death, in particular related with the recent use of oral corticosteroid (OCS).<sup>4</sup> These findings can indicate an increased asthma severity and/or poor control and, in accordance with data from previous coronavirus outbreaks, that systemic corticosteroids were associated with a higher viral load.<sup>5</sup>

We agree with Carli et al<sup>1</sup> that further studies focused on asthma and its different phenotypes are needed to provide a better understanding of the impact of SARS-CoV-2 infection in patients with asthma.<sup>6</sup> Nevertheless, for the moment, it seems crucial that patients with asthma do not stop their controller medication, that may lead to a higher risk of asthma exacerbations, increased OCS use and higher probability to emergency room access and hospitalization that represent themselves significant risk factors for coronavirus exposure and spread.

In conclusion, according with the available data, patients with asthma must still be included in the high-risk groups for COVID-19 and more data are needed to understand the relationship between asthma and COVID-19.

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**Conflict of interest:**None declared.

**Support:** No funding was received in the publication of this letter.

**Author's contributions:** MMA and MTB performed data analysis and drafted the manuscript. CSS, RA and JB provided critical review. All authors approved the final draft of the manuscript.